RELATIONSHIP OF INSTRUCTIONAL SETTING AND ASSOCIATED VARIABLES TO READING ACHIEVEMENT FOR TITLE I STUDENTS IN A FLORIDA URBAN SCHOOL DISTRICT

By

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A DISSERTATION PRESENTED TO THE GRADUATE COUNCIL OF
THE UNIVERSITY OF FLORIDA
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF EDUCATION

UNIVERSITY OF FLORIDA

1980

ACKNOWLEDGMENTS

Sincere appreciation is offered to Dr. Michael Nunnery, chairman of my supervisory committee, and to the members of the committee, Dr. Ralph Kimbrough, Dr. Ruthellen Crews, and Dr. Tom Healy, for their support and assistance. Special thanks are extended to Dr. Nunnery for his encouragement and guidance.

I appreciate the help of my friends and colleagues for their special contributions to the accomplishment of this endeavor: the district research staff for providing access to the test data and advice about the data analysis; Mrs. Hope Sweat, Mrs. Josie Johnson, Mrs. Kay Palmer, and their students for key punching and verifying the data cards; Mr. Phil Cooper of International Business Machines Corporation for sorting the data cards; and Mrs. Gail Wetmore for her assistance in editing and proofing.

Words cannot fully express my love and appreciation for my family. I am grateful to my mother and father-in-law, Mr. and Mrs. R. Bruce Black, for their encouragement and assistance in coding data and to my nieces, Karla and Kristen Beany, who also assisted in coding data. To my mother and father, Mr. and Mrs. W. Hoyle Alford, I offer my love and sincere gratitude for their moral and financial support. A very special thanks and sincere love are expressed to my son, John; my daughter, Dale; and my husband, John, for their love, patience, understanding, and assistance.

Without the help of my committee members, my colleagues, my friends, and my family, this degree would not have been possible.

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Abstract of Dissertation Presented to the Graduate Council
of the University of Florida in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

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IN A FLORIDA URBAN SCHOOL DISTRICT

by

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June 1980

Chairman: Michael Y. Nunnery
Major Department: Educational Administration

Assistance to local educational agencies for compensatory education for children of low income families has been provided through Title I of the Elementary and Secondary Education Act (ESEA). The basic aim of most Title I programs has been to help Title I students learn the basic skills, more specifically, to increase their reading achievement. To bring about these reading achievement increases, local school administrators have been faced with making decisions about the operation and management of their Title I programs. Given the foregoing, the study focus was the relationships between administrative decisions concerning instructional setting and certain teacher variables and the reading achievement of Title I students. Specifically, the following primary question was investigated for each grade level, K-6: Is there a difference in reading achievement between students in Title I pullout classes and students in Title I mainstream classes? Since other variables could have contributed to the findings, secondary questions were also investigated: Is there a difference in reading

achievement between students whose Title I teachers are experienced and students whose Title I teachers are inexperienced? Is there a difference in reading achievement between students whose Title I teachers have a positive opinion of their instructional setting and students whose Title I teachers have a negative opinion of their instructional setting? Is there significant interaction between and among instructional setting, teacher experience, and teacher opinion of the instructional setting in regard to reading achievement? Seven hypotheses were formulated from these questions.

The study was conducted in a large urban school district in northern Florida. Of the 11,645 students enrolled in the Title I program during the 1978-79 school year, 7,567 students who had both a pretest and a posttest reading achievement score and who could be identified with a single teacher participated in the study.

Data pertaining to the independent variables (instructional setting, teacher experience, and teacher opinion of the instructional setting) were collected from teachers on an investigator designed instrument. Data pertaining to the dependent and covariate variables (reading achievement posttest and pretest scores) were obtained from district test records. These data records were matched to group the participants according to the various levels of the independent variables. A 2 x 2 x 2 analysis of covariance with pretest reading achievement scores being used as the covariate was utilized as the technique for testing the hypotheses. Of the 49 analyses that were made (seven hypotheses for seven grade levels), 9 were significant at the .05 level of confidence, 32 were not significant at the .05 level, and the computations could not be completed for the remaining 8 because of

insufficient data. It was concluded that there were no consistent relationships between reading achievement of students and the two types of instructional setting (pullout and mainstream), the two levels of teacher experience (experienced and inexperienced), and the two types of teacher opinion of the instructional setting (positive and negative). Additionally, there were no consistent interactions among the three variables. The general conclusion was that there was no logical pattern of relationships among type of instructional setting, level of teacher experience, and type of teacher opinion of the instructional setting and the reading achievement of Title I students.

CHAPTER I

INTRODUCTION

The Elementary and Secondary Education Act of 1965 (ESEA, Public Law 89-10) was established "to strengthen and improve educational equality and educational opportunities in the Nation's elementary and secondary schools" (U.S. Statutes, 1966, p. 27). On April 11, 1965, upon the occasion of signing the Act, President Lyndon B. Johnson made the following remarks:

> As a son of a tenant farmer, I know that education is the only passport from poverty.
>
> As a former teacher . . . I have great expectations of what this law will mean for all of our young people.
>
> As President of the United States, I believe deeply no law I have signed or will ever sign means more to the future of America. (Johnson, 1966, p. 414)

The extent to which ESEA has impacted on education in the United States is reflected in the billions of dollars that have been expended through Title I of ESEA since 1965. Assistance to local educational agencies for compensatory education for children of low income families is provided through Title I. For the 1979 fiscal year alone, over three billion dollars were appropriated for Title I (Harris, 1978).

The most significant impact has been on elementary school reading instruction. Commenting on 10 years of progress in remedial reading, Harris (1977) indicated that because the majority of Title I programs

had been funded for remedial reading, Title I had made a significant impact on reading instruction. In fact, in 1976, 90% of all school districts in the United States received Title I funds, 20% of the elementary school students in these districts received Title I services, and of the total number who received Title I services, 85% received reading instruction (NIE, 1977a, pp. v, vi).

Numerous studies have been conducted to ascertain the efficacy of Title I programs. As a part of the grant application from each school district there must be provided an evaluation plan. Results of these annual evaluations are reported to and compiled by state education agencies for final submission to the United States Office of Education (NACEDC, 1976, p. 5).

However, there have been relatively few studies designed to assess the nature of compensatory services provided for Title I students. In 1974, ESEA was extended and changed by the United States Congress to include a requirement that a study of compensatory education be conducted by the National Institute of Education (NIE). This study was to be conducted to assess the effectiveness of compensatory programs and to assess the service delivery alternatives which might improve the effectiveness of compensatory education programs (NIE, 1977a, pp. xii, xiii).

In Compensatory Education Services (NIE, 1977a), one of six publications of the NIE National Survey of Compensatory Education, a number of program inputs or characteristics were identified. The following instructional setting and teacher characteristics were among the service delivery characteristics identified in this survey. Seventy-five percent of Title I students received reading instruction in "pullout"

programs in which students left the regular classroom for supplemental instruction. Twenty-five percent of Title I students received reading instruction in "mainstream" programs in which students remained in the regular classroom for supplemental instruction. A large percentage of teachers assigned to Title I programs were highly qualified (pp. 25, 30).

The leadership of each district, and in many instances each school, designs the Title I program for that particular district or school. There are many types of Title I programs and many ways in which a Title I program can operate; therefore, a sound basis is needed for making these important curriculum and program decisions. However, decisions made about the operation of the program are often influenced by the pressures of operating the regular school program. The following examples, observed by the researcher, an experienced program administrator, are illustrative of the ways in which these decisions have been made. An administrator faced with declining enrollment and subsequent reductions in revenue decided to delay hiring Title I teachers until surplus teachers from the regular program had been assured a position. This delay resulted in filling Title I vacancies with inexperienced teachers. On the other hand, another administrator conserved money in the regular operating budget by assigning more experienced and more costly teachers to the Title I program and assigned less experienced and less costly teachers to the regular program.

Decisions about the instructional setting have also been affected by the pressures of the regular program. Pullout classes have most often been the option if additional space was available; mainstream programs have most often been the option when space was not available. Traditionally, the classroom area has been the domain of the classroom

teacher. Because of the nature of mainstream programs, the Title I teacher has impinged upon this domain, creating the possibility of strong opposition to the program by both the Title I and the classroom teacher.

The basic aim of most Title I programs is to help Title I students learn the basic skills, more specifically, to increase their reading achievement. To bring about these reading achievement increases, local school administrators are faced with making decisions about the operation and management of their Title I programs. Administrators need a sound data base for making such decisions. They need to know how these decisions affect Title I students; more precisely, how these decisions affect the reading achievement of Title I students.

Given the foregoing, the study reported herein focused on the relationships that existed between administrative decisions concerning instructional setting and certain teacher variables and the reading achievement of Title I students.

The Problem

Statement of the Problem

In general, the problem in this investigation was to determine if there were differences in reading achievement of Title I students in grades kindergarten through six in an urban school district who were in different types of instructional settings (pullout or mainstream) and to determine if the reading achievement was different when the variables of teacher experience and of teacher opinion of the instructional setting were considered.

Specifically, the following primary question was investigated for each grade level:

Is there a difference in reading achievement between students in Title I pullout classes and students in Title I mainstream classes?

While reading achievement and instructional setting interaction was of primary interest in this study, other variables could have contributed to the findings. To deal with this possibility, the following secondary questions were investigated for each grade level:

1. Is there a difference in reading achievement between students whose Title I teachers are experienced and students whose Title I teachers are inexperienced?
2. Is there a difference in reading achievement between students whose Title I teachers have a positive opinion of their instructional setting and students whose Title I teachers have a negative opinion of their instructional setting?
3. Is there significant interaction between and among instructional setting, teacher experience, and teacher opinion of the instructional setting in regard to reading achievement?

These four questions provided direction in defining the problem and formulating the hypotheses of the study. They established the various levels of the major variables that were considered.

Delimitations and Limitations

1. This study was confined to three basic variables and certain levels of these variables as noted below. (These notations are used throughout the study.)

Variable A: Instructional setting.

A_1: Pullout classes

A_2: Mainstream classes

Variable B: Teacher experience.

B_1: Experienced teacher

B_2: Inexperienced teacher

Variable C: Teacher opinion of the instructional setting.

C_1: Positive opinion

C_2: Negative opinion

2. The potential participants for the study were the 11,645 students enrolled in the Title I program during the 1978-79 school year in a single urban school district in northern Florida. Therefore, the findings are suggestive rather than conclusive for generalizing beyond the participants in question.

3. The study was confined further to those Title I students who had both pretest and posttest scores and who could be identified with a single Title I teacher. The number of students meeting the criteria and participating in the study was 7,567. The scores were obtained from district records of selected subtests of the Stanford Achievement Test or the Stanford Early School Achievement Test administered in the spring or fall of 1978, and in the spring or fall of 1979. The date of administration and the specific tests and subtests varied with grade level groupings.

4. Data regarding instructional setting, teacher experience, and teacher opinion of the instructional setting were secured from a teacher completed instrument developed by the investigator (see Appendix A).

5. Since participants in the study were previously assigned to Title I classes on a nonrandom basis, the design of the study was ex post facto. There are weaknesses inherent in the ex post facto design that restrict the interpretation of the findings to inferences about the relationship of the variables rather than cause-effect conclusions.
6. The data source of information pertaining to reading achievement was limited to computer records within the district. To the extent that these data were inaccurate or incomplete, the study lacks validity.

Justification for the Study

Billions of dollars have been spent throughout the United States to fund Title I programs. During the 1976-77 school year, approximately 85% of Title I students received some type of supplementary reading instruction and approximately 75% of these students were in pullout classes (NIE, 1977a, pp. 20, 30). Research studies designed to assess the relative effectiveness of pullout and mainstream classes have been limited, both in number and in the variables investigated. Yet, school administrators make decisions each year about the instructional setting and the teachers they assign to Title I classes. When the paucity of the literature is considered, coupled with the illustrations cited in the introduction, the need for an examination of these variables (instructional setting, teacher experience, and teacher opinion of the instructional setting as related to reading achievement) for Title I students was further reinforced.

The study was conducted with the expectation that findings would be of value to school administrators in planning and implementing Title I programs. This expectation was supported by the fact that the superintendent of the selected district directed that such a study be done as a basis for future decision making. If it were found that the instructional setting and the teacher variables affect the reading achievement of Title I students, then administrators would have a data base for making appropriate decisions about Title I programs. If it were found that the instructional setting and the teacher variables have no significant effect on reading achievement of Title I students, then undue concern in this matter would be avoided.

Assumptions

One assumption basic to this study was that performance on a nationally normed, standardized test was an appropriate measure of reading achievement. Another assumption was that an appreciable relationship existed between the pretest scores and the posttest scores. This assumption is inherent in the procedure for utilizing the pretest score as a covariate to reduce the error variance.

Definition of Terms

Experienced teacher. This term refers to a Title I teacher with a total of four or more years in the teaching profession, including the 1978-1979 school year.

Inexperienced teacher. This term refers to a Title I teacher with a total of three years or less in the teaching profession, including the 1978-1979 school year.

Instructional setting. This term refers to the location of the Title I reading class--inside the regular classroom (mainstream) or outside the regular classroom (pullout).

Mainstream class. This term refers to the Title I reading class that was held inside the regular classroom area with the regular classroom teacher and the remaining class members present. To participate in a mainstream class, Title I students remained in the regular classroom area to receive supplemental reading instruction from the Title I teacher.

Negative opinion of the instructional setting. This term is used to describe teachers who indicated in their response to the teacher instrument that they did not like the instructional setting.

Posttest score. This term refers to the scaled score obtained on selected standardized tests administered in the spring or fall of 1979. The date of administration varied with grade level groupings.

Positive opinion of the instructional setting. This term is used to describe teachers who indicated in their response to the teacher instrument that they liked the instructional setting.

Pretest scores. This term refers to the scaled score obtained on selected standardized tests administered in the spring or fall of 1978. The date of administration varied with grade level groupings.

Pullout class. This term refers to the Title I reading class that was held outside of the regular classroom and out of the presence of the classroom teacher and the remaining class members. To participate in a pullout class, Title I students left the regular classroom to receive supplemental reading instruction from the Title I teacher.

Reading achievement. This term refers to the reading performance of a student as measured by selected reading subtests of the Stanford Achievement Test or the Stanford Early School Achievement Test. The subtests varied by grade level.

Supplemental reading instruction. This term refers to instruction in the skill area of reading. This instruction, provided by the Title I teacher, was in addition to the reading instruction provided by the regular classroom teacher.

Teacher experience. This term refers to the number of years a teacher has in the teaching profession, including the 1978-1979 school year.

Teacher opinion of the instructional setting. As referred to in this study, teacher opinion was negative or positive depending upon whether Title I teachers indicated on the teacher instrument that they liked the instructional setting or disliked the instructional setting.

Title I program. This term refers to the totality of plans, decisions, activities, and people involved in providing supplemental, compensatory education using monies from Title I. The Title I program in the selected district was concentrated in 77 elementary schools and was designed to provide supplemental reading instruction to Title I students.

Title I schools. This term refers to those 77 elementary schools in the selected district which received money to implement Title I programs. Such allocations were based on the number or percentage of low income families represented by the school population.

Title I student. This term refers to the student whose reading achievement score fell below a specified score, who attended a school

with a Title I program, and who was enrolled in the Title I program. As a Title I student, the student received supplemental reading instruction from the Title I teacher.

Title I teacher. This term refers to the teacher whose full time assignment was teaching reading to Title I students. This teacher was assigned to the same school throughout the school day and school year to provide supplemental reading instruction to small groups of Title I students.

Hypotheses

For purposes of stating and interpreting the hypotheses, the variables are categorized as Variable A: Instructional setting (pullout and mainstream), Variable B: Teacher experience (experienced and inexperienced), and Variable C: Teacher opinion of instructional setting (positive and negative). Stated in operational null form, hypothesis one relates to the primary question and hypotheses two through seven relate to the secondary questions. The hypotheses for each grade level are as follows:

1. There are no significant differences in reading achievement between the two levels of Variable A.
2. There are no significant differences in reading achievement between the two levels of Variable B.
3. There are no significant differences in reading achievement between the two levels of Variable C.
4. There is no significant interaction between the two levels of Variable A across the two levels of Variable B (A x B).

5. There is no significant interaction between the two levels of Variable A across the two levels of Variable C (A x C).
6. There is no significant interaction between the two levels of Variable B across the two levels of Variable C (B x C).
7. There is no significant interaction between the two levels of Variable A and the two levels of Variable B across the two levels of Variable C (A x B x C).

In the analysis of the data, significance at the .05 level of confidence was used as a minimum for the rejection of a null hypothesis.

Procedures

The problem in this investigation was to determine if there were differences in reading achievement of Title I students in grades kindergarten through six in an urban school district who were in different types of instructional settings (pullout or mainstream) and to determine if the reading achievement was different when the variables of teacher experience and of teacher opinion of the instructional setting were considered.

This section contains the procedures that were used to conduct the investigation. First, the setting of the study is discussed, including a description of the Title I schools in the selected district. Second, the procedures for identifying the participants are stated. Next, the data sources and collection procedures are discussed for the independent variables (instructional setting, teacher experience, and teacher opinion of the instructional setting) and for the dependent and covariate variables (reading achievement scores). Finally, the section is concluded with a description of the data analysis procedures.

Setting of the Study

The study was conducted in a large urban public school district in northern Florida. In 1978, total population of the county, the boundaries of which were coterminous with the boundaries of the school district, was 574,004; 23% were of minority races--mostly black (Thompson, 1979, p. 25). The economy of the county was broad based and was structured around the following: finance, insurance, trade, and manufacturing (Chamber of Commerce, 1977, Sec. 2, p. 1).

In 1978, there were 105,209 students enrolled in kindergarten through twelfth grade. The ratio of white to black students district-wide was 66:34. Of the 56,463 elementary students in the district, 11,645 or 21% were participants in the district's Title I program, a program designed to provide supplementary reading instruction for students who met the Title I achievement criteria and who attended one of the 77 Title I schools. The schools varied in both geographic and demographic features; they included urban, rural, and suburban schools. The size of the student population served in the 77 schools ranged from 251 to 982 and contained from 12% to 100% minority students. Title I enrollments in these schools ranged from 11% to 56% of their total enrollments.

Identification of Participants

From the population of students enrolled in the 1978-79 Title I program in grades kindergarten through six in the selected district, those students who had both a pretest and a posttest score were eligible to participate in the study. The test scores resulting from the district-wide spring, 1978, and spring, 1979, administrations of the Stanford

Achievement Test (SAT) in grades two through six and the district-wide fall, 1978, and fall, 1979, administrations of the Stanford Early School Achievement Test (SESAT) in kindergarten and grade one provided the data for the selection of Title I students and the test data for analysis.

In 1978, the criterion for enrolling in the Title I program differed by grade level. Students in grades two, four, five, and six had to score at or below the 30th national percentile in Total Reading. Students in kindergarten and grade one had to score at or below the 30th national percentile on the Letters and Sounds subtest. Because a state funded compensatory education program served third grade students from the 17th to the 30th national percentile, Title I served students in the third grade who scored at or below the 16th national percentile.

Title I teachers kept the only up-to-date records of Title I teacher-student class assignments. During the week of the posttest for students in grades one through six, Title I teachers made lists of Title I students who were enrolled that week on a data collection instrument designed by the investigator. These data were matched to the district's computer test records for Title I students in each school. Students for whom no match could be made were eliminated from the study.

Of the 11,645 Title I students during the 1978-1979 school year, 7,567 participated in the study: 722 in kindergarten, 684 in first grade, 1,738 in second grade, 561 in third grade, 1,382 in fourth grade, 1,252 in fifth grade, and 1,228 in sixth grade.

Sources and Collection of Data for Independent Variables

An instrument was designed for collecting from Title I teachers the data pertaining to the participants and to the independent variables

(see Appendix A). A content validation check on the instrument was completed by four members of the district's research and evaluation staff. An additional review was made by the assistant superintendent for research and evaluation who then distributed the instrument to Title I teachers during the week students in grades one through six took the posttest. The data records obtained from the instrument were hand sorted and matched with the district's computer records of test scores to determine the actual participants for the study and to group the participants according to the various levels of the independent variables.

Variable A: Instructional setting. A portion of the teacher instrument described above was used by teachers to indicate the instructional setting (pullout or mainstream) of each Title I class they taught. These data records were matched to district test records of Title I students to group the students by instructional setting.

Variable B: Teacher experience. A portion of the teacher instrument described above was used by teachers to indicate their number of years in the teaching profession, including the 1978-1979 school year. Title I teachers with four or more years of experience were categorized as experienced teachers; those with three years or less were categorized as inexperienced teachers. These data records were also matched with Title I student data from the district test records to group the students by teacher experience.

Variable C: Teacher opinion of the instructional setting. Another portion of the teacher instrument described above was used by Title I teachers to indicate their opinion of the instructional setting for each Title I class they taught. Fixed-alternative items offered

teachers a choice between two responses: like-dislike. Title I teachers who indicated that they liked the instructional setting were categorized as having a positive opinion; those who indicated that they did not like the instructional setting were categorized as having a negative opinion. These data records were matched with Title I student data from the district test records to group the students by teacher opinion of the instructional setting.

Sources and Collection of Data for Dependent Variable and Covariate

Reading achievement was assessed each year in the selected district's regular evaluation program. The Stanford Achievement Test (SAT) was administered in grades one through six in April. The Stanford Early School Achievement Test (SESAT) was administered in October. All test results were stored in the district's computer records. Scaled scores (expanded standard scores) for the following reading achievement measures were extracted from the computer records for use in the study:

Kindergarten. The SESAT I administered in October, 1978, and the SESAT Level II administered in October, 1979, when the participants were in first grade provided the pretest and posttest data. The scores on the Letters and Sounds subtest were used as the measure of reading achievement.

Grade one. The SESAT Level II administered in October, 1978, and the SAT, Primary I Level administered in May, 1979, provided the pretest and posttest data. The scores on the Letters and Sounds subtest were used as the pretest reading achievement measure and the Word Study Skills subtest scores were used as the posttest reading achievement measure.

Grades two through six. In grades two through six, pretests were administered in May, 1978, and posttests were administered in May, 1979. The Total Reading score was used as the reading achievement measure. Specific tests administered at each grade level are listed below:

Grade Two	Pretest: SAT, Primary I Level, Form A Posttest: SAT, Primary II Level, Form A
Grade Three	Pretest: SAT, Primary II Level, Form A Posttest: SAT, Primary III Level, Form A
Grade Four	Pretest: SAT, Primary III Level, Form A Posttest: SAT, Intermediate I Level, Form A
Grade Five	Pretest: SAT, Intermediate I Level, Form B Posttest: SAT, Intermediate I Level, Form B
Grade Six	Pretest: SAT, Intermediate I Level, Form A Posttest: SAT, Intermediate II Level, Form A

Data Analysis

The basic data technique utilized for each grade level was a 2 x 2 x 2 analysis of covariance design with one dependent variable (reading achievement posttest score) and one covariate (reading achievement pretest score). This design was used to test each of the variables as well as all possible combinations of variables. Specifically, in regard to hypothesis one, the mean achievement scores for Title I students in pullout classes were compared for differences with mean achievement scores for Title I students in mainstream classes. Similarly, for hypotheses two and three, mean achievement scores for Title I students were compared for differences when the students were grouped by teacher experience and then by teacher opinion of the instructional setting. For hypotheses four through seven,mean achievement scores for Title I students were compared for all possible combinations of the three variables.

Organization of the Remainder of the Study

Chapter II contains a review of the literature related to the topics under consideration in this study. Chapter III contains the presentation, analysis, and interpretation of the data as the data relate to the statement of the problem and the hypotheses of the study. The final chapter, Chapter IV, contains a summary, conclusions, and discussion.

CHAPTER II

REVIEW OF THE LITERATURE

Literature and research studies related to the problem in the present investigation were in two categories. The first category related to instructional setting and student achievement. The second category related to teacher characteristics and student achievement. Accordingly, these categories form the two major sections of the chapter. The chapter is concluded with a brief summary of the literature.

Instructional Setting and Student Achievement

The literature related to instructional setting was sparse. Only three studies, each related to instructional settings for ESEA Title I programs, were located by the investigator. The first study was conducted by Kiesling (1971) to determine the relationship of instructional process and program organization to gains in performance of students in 42 compensatory education projects in California. He studied the effectiveness of supplementary instruction given in a separate facility as opposed to that given in the regular classroom. Kiesling found small but significant (.10 level of confidence) gains in performance favoring instruction in a separate facility (p. 39).

The purpose of the second study, conducted by NIE (1977a), was to provide a representative picture of compensatory services funded by

Title I and other sources. A sample of 100 school districts was selected to be included in the survey. Since "one of the controversial issues in the delivery of compensatory instruction has been the question of whether to provide special instruction inside or outside the students' regular classroom" (p. 30), the researchers collected information on the prevalence of pullout programs. They found that 75% of Title I students who received reading instruction received that instruction in pullout programs and that students in pullout programs were twice as likely to miss regular instruction as were students in regular reading instruction (p. 31).

The last study reviewed was also conducted by NIE (1977b). The Instructional Dimensions Study, reported under the title, The Effects of Services on Student Development, was focused on three program characteristics and their effects on student achievement: instructional setting, time and content of instruction, and individualization. A purposeful sample, consisting of 400 classrooms in 100 schools from 14 districts, was selected. The researchers purported the sample to be representative of the types of Title I programs nationwide (p. 14).

Students in grades one and three were given appropriate levels of the California Test of Basic Skills (CTBS) in the fall of 1976 and in the spring of 1977. From the analysis of the test results, it was determined that the students in both grades made substantial gains in reading and mathematics. Students in grade one mainstream programs made significantly larger gains in both reading and mathematics than those in pullout programs. In the third grade there were no differences in reading gains, but students in pullout classes made significantly larger gains in mathematics than those in mainstream programs (p. 32).

Teacher Characteristics and Student Achievement

Since the mid 1950's, numerous books, articles, literature reviews, and research studies have focused on teachers and their effects on students; many of these studies have been focused on teacher behaviors related to classroom processes, student-teacher interaction, and sometimes to student achievement (Bennett, 1976; Biddle & Ellena, 1964; Emans & Fox, 1973; Gage, 1963; Good, Biddle, & Brophy, 1975; Rosenshine, 1970; Rosenthal & Jacobson, 1968). Similarly, during the same period a number of other studies focused on schools and their effects on students--mostly in terms of specific school, pupil, and teacher characteristics related to student achievement. In these production-function studies, there has been a focus on multiple independent and dependent variables and frequently regression techniques have been used for data analysis.

In the subsections which follow, the literature and research related to teacher experience and teacher opinion are described. Guthrie, Kliendorfer, Levin, and Stout in Schools and Inequality (1971) and Averch, Carroll, Donaldson, Kiesling, and Pincus in How Effective Is Schooling? (1972) reviewed and summarized much of the research on teacher characteristics. Some of these summaries are utilized in the review; they are cited as secondary sources.

Teacher Experience and Student Achievement

Mollenkopf and Melville (cited in Averch et al., 1972; Guthrie et al., 1971), forerunners of educational input-output analysis, conducted a study in 1956 for Educational Testing Service (ETS). Using a

nation-wide sample of 9,000 ninth grade students, Mollenkopf and Melville did an analysis of 27 independent variables and 7 dependent variables, including aptitude and achievement test scores. They found no correlation with the teacher experience variable which was defined as percent of full-time teachers with five or more years of service.

The Equal Educational Opportunity Survey (EEOS) was one of the major research studies of the 1960's. Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, and York (1966), authors of the famed Coleman Report, studied 645,000 students in grades 1, 3, 6, 9, and 12 in 3,100 schools. Teacher characteristics and school characteristics of those students were used to determine the effects of educational inputs on student achievement. Coleman and his associates found that "variations in school averages of teachers' characteristics accounted for a higher proportion of variation in student achievement than did all other aspects of the school combined" (p. 316).

The EEOS data have been reanalyzed by a number of educational researchers studying the effects of teacher characteristics on students. Levin (1970), using EEOS data for almost 600 sixth grade students from 36 schools in a large eastern city, found teacher experience related to students' verbal scores.

Fox (cited in Averch et al., 1972) found a significant, positive relationship of teacher man years to median reading stanines of 11th graders from 39 Chicago schools. Using data from Project Talent, Thomas (cited in Averch et al., 1972; Guthrie et al., 1971) found consistently positive results toward average experience of teachers. Goodman (1959), Peaker (1968) (both cited in Guthrie et al., 1971), and Guthrie et al. (1971) all reported positive relationships.

On the other hand, some researchers have found negative or mixed results. In one study of California compensatory education students, Hanushek (1970a) indicated that experience-achievement relationships were insignificant for all four regression equations that were computed. In another study in the same report, Hanushek, using EEOS data, found that there were significantly positive relationships for both white and black schools.

Burkhead and Benson (both cited in Averch et al., 1972; Guthrie et al., 1971) found mixed relationships in different school districts. Burkhead found significantly positive relationships between median teacher experience and reading gain in 39 Chicago schools and in 177 Project Talent schools, but no significant relationships for these variables in 22 Atlanta schools. Benson, using salary data (a function of teacher experience and teacher training), found negative relationships in large districts, positive relationships in medium districts, and mixed relationships in small districts. His study was conducted in 249 California school districts.

Michaelson (1970), using EEOS data, found mixed relationships with 1,055 sixth grade students in a large eastern city. Kiesling (1969) studied the relationship between median years of teaching experience and achievement of fourth graders in 60 school districts. He found no relationship for students from families in top occupational backgrounds and a significant and positive relationship for students from families in lower occupational backgrounds. In another study in 1970, Kiesling (cited in Averch et al., 1972) found some positive and some negative relationships in the regressions that were computed for fifth and eighth grade students from 86 New York State school districts.

Reviewing studies related to teacher characteristics and student achievement in the basic skills, Powell, Bolduc, and Wenzel (1977) concluded that sufficient concurrence existed for teacher experience to be considered as one of many significant variables affecting learning.

Hanushek (1970b) hypothesized that differences existed among teachers which led to differences in achievement among students, but found that neither teaching experience nor graduate education contributed to gains in student achievement scores. In a reanalysis of the EEOS data, Smith (1972) concluded that "the Teacher Characteristics factor does not have a stronger relationship to achievement than the Facilities and Curriculum factor" (pp. 310, 311).

And finally, Katzman (1968) (cited in Averch et al., 1972), reported a significant and negative relationship between the percent of permanent teachers with 1 to 10 years of experience and reading test scores in 56 Boston schools. Commenting on the Katzman study, Kiesling (1969) made the supposition that there might be a certain point in a teacher's career beyond which additional experience has little effect on teacher effectiveness.

To assess the state of knowledge regarding the determinants of educational effectiveness, Averch et al. (1972) examined many of the studies described herein. They found that significant resources in one study were the same resources that were not significant in other studies; they concluded that no school resource consistently related to student outcomes (pp. 44, 45).

Teacher Opinion and Student Achievement

Different social psychologists have defined the terms opinions, attitudes, and beliefs in different ways. Halloran (1967) compiled and

summarized some of these definitions in his book, Attitude Formation and Change. Halloran noted that Katz defined an opinion as a verbal expression of an attitude and an attitude as the predisposition of an individual to evaluate in a favorable or unfavorable manner an object or symbol. According to Halloran, authors Smith, Bruner, and White equated attitude, opinion, and sentiment; he noted that Secord and Bachman made a distinction between attitudes and opinions, defining opinions as emotionally free beliefs that one holds about some object or objects. Attitudes were defined as having emotional components (p. 20).

In Human Behavior, Berelson and Steiner (1964) explained the differences between opinions, attitudes, and beliefs. They referred to opinions as topical, short-termed judgments, to attitudes as more enduring and inclusive, and to beliefs as having to do with the central values of life. According to these authors,

> Opinions and attitudes are presumably adapted to beliefs, which are deep-seated. . . . Opinions are sometimes called impressions or guesses, attitudes are sometimes called views or convictions, and beliefs are sometimes called values or sentiments. (p. 558)

Nunnery and Kimbrough (1971) defined attitudes and opinions in a similar manner:

> an attitude may be defined as a hypothetical construct representing a person's predisposition to evaluate some aspect (a person, issue, object, or symbol) of his environment in a positive or negative manner. Opinion is an overt verbal expression by a person about a specific phenomenon at a given point in time and under a given set of circumstances. Opinions reflect attitudes. However, they are less stable. . . . (p. 61)

Fishbein and Ajzen (1972) stated that attitude, belief, and opinion variables "have not been shown to behave differently . . ." (p. 492),

so investigators have not been concerned with distinctions between the terms. Intuitively, these investigators have selected variables that seem to fit the purpose of their investigation (p. 492).

There have been relatively few research studies conducted in this area (Stern, 1963; Getzels & Jackson, 1963). No studies concerning teacher opinions and student achievement were located. However, there have been several analyses of the EEOS data. Coleman et al. (1966) found that a teacher's attitude toward teaching (preference for teaching middle class students) was negatively related to student achievement.

Armor (1972) grouped together the following responses to form a variable called "a good teacher attitude": (1) reenter teaching if deciding again, (2) not prefer to change schools, (3) no preference for a particular ethnic composition, (4) no preference for a particular racial composition, (5) expect to remain in teaching until retirement, and (6) prefer to see a black student go to a white college (p. 228). For the nation as a whole, Armor found that the product-moment correlation with student achievement was -.42 (p. 180).

For students in the Northeast and Great Lakes regions, Hanushek (1970a) found that teachers' attitudes toward teaching and students had no significant relationship with achievement. Additionally, Hanushek (1970b) found that there were no significant relationships between achievement of 1,061 California third grade students and teacher attitudes about compensatory education and minority students.

Researchers that used a single question as a variable found positive relationships between attitude and student achievement. As an example of this approach, Levin (1970) used the single question of whether or not the teachers preferred to remain in their present school

to measure their attitude toward their school. Using this single question response from teachers of 600 sixth grade students in 36 schools in a large eastern city, Levin found a positive relationship between those teachers indicating a preference to remain in their school and the achievement of their students. Guthrie et al. (1971), using this same single question of teachers of 5,284 Michigan sixth grade students, found a similar relationship. In addition, they found that teaching as a career choice and compatibility of staff members were each significantly related to student achievement.

Summary

There was no comprehensive literature related to the topic under consideration in the study (instructional setting, teacher experience, and teacher opinion of the instructional setting). However, the preponderance of the data supported the following generalizations.

1. The pullout instructional setting was the most widely utilized setting for ESEA Title I reading instruction.
2. The data were mixed regarding the impact of instructional setting on student achievement. In one study students in the pullout setting had higher achievement. In the other it was found that the mainstream setting was more effective for first grade students and that the setting made no difference for third grade students.
3. Teacher experience did not consistently relate to student achievement.

4. There were no data regarding the relation of teacher opinion of the instructional setting and student achievement. Teacher attitude (sometimes used interchangeably with opinion), in general, did not consistently relate to student achievement.

CHAPTER III

PRESENTATION AND ANALYSIS OF THE DATA

The basic problem in the study was to determine if there were differences in reading achievement of ESEA Title I students in grades kindergarten through six in an urban school district who were in different types of instructional settings (pullout and mainstream) and to determine if the reading achievement was different when the variables of teacher experience and of teacher opinion of the instructional setting were considered. The chapter contains the presentation and analysis of the data used in testing the hypotheses which provided specific direction for the investigation.

As suggested above, the variables considered were Variable A, Instructional setting; Variable B, Teacher experience; and Variable C, Teacher opinion of the instructional setting. Variable A had two levels: students in Title I pullout classes and students in Title I mainstream classes. Variable B had two levels: students whose Title I teacher was experienced and students whose Title I teacher was inexperienced. Variable C had two levels: students whose Title I teacher had a positive opinion of the instructional setting and students whose Title I teacher had a negative opinion of the instructional setting.

The participants for the study were the 7,567 Title I students in the large urban school district who had both a pretest and a posttest reading achievement test score and who could be identified with a single

teacher. The analysis used in the study was analysis of covariance with a 2 x 2 x 2 factorial design using one dependent variable (reading achievement posttest score) and one covariate (reading achievement pretest score). The data from the covariance analysis are presented by grade level in Tables 8, 9, 10, 11, 12, 13, and 14 which are contained in Appendix B. In the sections which follow the results are presented by six of the hypotheses which gave direction to the analysis. Due to missing data it was not possible to do an analysis for the interaction effect of the three variables (A x B x C); thus, there was no testing of the hypothesis that there would be no significant interaction among the three variables: instructional setting, teacher experience, and teacher opinion of the instructional setting.

Impact of Variable A: Instructional Setting on Reading Achievement of Students

The first hypothesis was to the effect that there would be no significant difference at the .05 level between the reading achievement of the Title I students at each grade level who were provided instruction in a pullout instructional setting and those who were provided instruction within the regular classroom (mainstream instructional setting). Table 1 contains the pretest (before the reading instruction was provided) and the posttest reading achievement means (after the reading instruction had been provided) for each grade level by type of instructional setting. The reader is reminded that the measure of reading achievement at each grade level was the scaled scores of students on the following tests. For kindergarten the Letters and Sounds subtest from the Stanford Early School Achievement Test (SESAT) was used for

Table 1

Pretest and Posttest Mean Reading Achievement Scores[a] by Type of Instructional Setting (Variable A) for Grades K-6 and F Ratios

Grade Level	Grade Level N	Grade Level Posttest Mean	Type of Instructional Setting						F Ratio[b]
			Pullout			Mainstream			
			n	Pretest Mean	Posttest Mean	n	Pretest Mean	Posttest Mean	
K	722	77.658	321	31.916	78.561	401	30.584	76.935	.075
1	684	91.906	446	68.135	92.294	238	68.235	91.181	.369
2	1,738	117.116	1,179	101.481	116.824	559	101.315	117.733	4.909[c]
3	561	127.127	423	111.520	126.728	138	113.022	128.348	.826
4	1,382	138.161	985	126.297	137.494	397	127.408	139.816	5.442[c]
5	1,252	146.065	902	133.663	145.724	350	133.594	146.946	2.528
6	1,228	153.936	1,168	145.497	153.899	60	145.867	154.650	.017

[a]Mean scores expressed in terms of scaled scores.

[b]Based on a comparison of instructional setting with the pretest scores being used as a covariate.

[c]Significant beyond the .05 level.

both the pretest and posttest. For grade one the Letters and Sounds subtest, SESAT, was used for the pretest and the Word Study Skills subtest from the Stanford Achievement Test (SAT) was used as the posttest. The Total Reading score from the SAT (for both pretest and posttest) was used as the reading measure for grades two through six. In the paragraphs that follow, the results in terms of the hypothesis are presented for each grade level.

Kindergarten. Table 1 contains the data showing that the difference related to instructional setting (Variable A) was not significant at the .05 level of confidence. As shown in the table, the F ratio was .075 which was significant at the .784 level. The posttest reading achievement mean for the pullout group (Variable A_1) was 78.561. The posttest mean for the mainstream group (Variable A_2) was 76.935. Hypothesis one was accepted for kindergarten.

Grade one. As shown in Table 1, the difference related to Variable A was not significant at the .05 level. The F ratio was .369 which was significant at the .544 level of confidence. As shown in the table, the pullout group (Variable A_1) had a posttest mean of 92.294 and the mainstream group (Variable A_2) had a posttest mean of 91.181. Therefore, hypothesis one was accepted for grade one.

Grade two. Table 1 also contains the data showing that the impact of instructional setting was significant for grade two, having an F ratio of 4.909. This was significant beyond the .05 level of confidence (.027). As can be seen in the table, the pullout classes had a posttest mean of 116.824 and the mainstream classes had a posttest mean of 117.733. Therefore, hypothesis one was rejected for grade two.

Grade three. The difference related to instructional setting was not significant for grade three. As shown in Table 1, the F ratio was .826 which was not significant at the .05 level of confidence (.364). The pullout students had a posttest mean of 126.728 and the mainstream students had a posttest mean of 128.348. Hypothesis one was accepted for grade three.

Grade four. As shown in Table 1, the difference related to Variable A was significant beyond the .05 level of confidence. The F ratio was 5.442 which was significant at the .020 level. Pullout classes had a posttest mean of 137.494 and mainstream classes had a posttest mean of 139.816. Since the difference between these means was significant, hypothesis one was rejected for grade four.

Grade five. The difference related to instructional setting was not significant at the .05 level of confidence for grade five. As shown in Table 1, the F ratio was 2.528 which was significant at the .112 level of confidence. The pullout group (Variable A_1) had a posttest mean of 145.724 and the mainstream group (Variable A_2) had a posttest mean of 146.946. Therefore, hypothesis one was accepted for grade five.

Grade six. As shown in Table 1, the impact of the instructional setting variable was not significant. Having an F ratio of .017, it was significant at the .897 level of confidence. The posttest mean for the pullout group was 153.899. The posttest mean for the mainstream group was 154.650. Since the difference between these means was not significant at the .05 level of confidence, hypothesis one was accepted for grade six.

Impact of Variable B: Teacher Experience on Reading Achievement of Students

The second hypothesis which gave direction to the study was that there would be no significant differences at the .05 level between the reading achievement of the Title I students at each grade level who were taught reading by experienced teachers (four or more years of teaching) and those who were taught reading by inexperienced teachers (less than four years of teaching). Shown in Table 2 are the pretest and posttest reading achievement means for each grade by level of teacher experience (Variable B) and the F ratios which show the impact of the variables when the pretest score is used as a covariate. The results of the analysis in terms of hypothesis two are presented for each grade level in the paragraphs that follow.

Kindergarten. Contained in Table 2 are the data showing that the difference in posttest reading scores related to the levels of teacher experience (Variable B) was significant beyond the .05 level of confidence. As shown in the table, the F ratio was 4.821 which was significant at the .028 level. The reading achievement posttest mean for the experienced teacher group (Variable B_1) was 78.626 and the reading achievement posttest mean for the inexperienced teacher group (Variable B_2) was 75.360. Hypothesis two was rejected for kindergarten.

Grade one. As shown in Table 2, the difference related to Variable B, teacher experience, was not significant at the .05 level. The F ratio was 1.712 which was significant at the .191 level of confidence. As shown in the table, the experienced teacher group (Variable B_1) had a posttest mean of 92.017 and the inexperienced

Table 2

Pretest and Posttest Mean Reading Achievement Scores[a] by Level of Teacher Experience (Variable B) for Grades K-6 and F Ratios

Grade Level	Grade Level N	Grade Level Posttest Mean	Level of Teacher Experience						F Ratio[b]
			Experienced			Inexperienced			
			n	Pretest Mean	Posttest Mean	n	Pretest Mean	Posttest Mean	
K	722	77.658	508	31.191	78.626	214	31.140	75.360	4.821[c]
1	684	91.906	602	67.885	92.017	82	70.256	91.098	1.712
2	1,738	117.116	1,465	101.520	117.386	273	100.930	115.674	6.455[c]
3	561	127.127	445	111.670	126.865	116	112.733	128.129	.428
4	1,382	138.161	1,202	126.498	138.366	180	127.411	136.794	4.470[c]
5	1,252	146.065	989	133.786	146.155	263	133.110	145.730	.030
6	1,228	153.936	858	145.873	154.379	370	144.686	152.908	.980

[a]Mean scores expressed in terms of scaled scores.

[b]Based on a comparison of teacher experience with the pretest scores being used as a covariate.

[c]Significant beyond the .05 level.

teacher group (Variable B_2) had a posttest mean of 91.098. Therefore, hypothesis two was accepted for grade one.

Grade two. Table 2 also contains the data showing that the impact of teacher experience (Variable B) was significant for grade two, having an F ratio of 6.455. This was significant beyond the .05 level of confidence (.011). As can be seen in the table, the experienced teacher classes had a posttest mean of 117.386 and the inexperienced teacher classes had a posttest mean of 115.674. Therefore, hypothesis two was rejected for grade two.

Grade three. As shown in Table 2, the difference related to the teacher experience variable was not significant at the .05 level. Having an F ratio of .428, it was significant at the .513 level of confidence. The posttest mean for the experienced teacher group was 126.865. The posttest mean for the inexperienced teacher group was 128.129. Hypothesis two was accepted for grade three.

Grade four. The difference related to teacher experience (Variable B) was significant beyond the .05 level of confidence. As shown in Table 2, the F ratio was 4.470 which was significant at the .035 level. The experienced teacher group had a posttest mean of 138.366 and the inexperienced teacher group had a posttest mean of 136.794. Therefore, hypothesis two was rejected for grade four.

Grade five. As shown in Table 2, the impact of Variable B was not significant at the .05 level of confidence. The F ratio was .030 which was significant at the .864 level. As can be seen from the table, the experienced teacher group (Variable B_1) had a posttest mean of 146.155 and the inexperienced teacher group (Variable B_2) had a posttest mean of 145.730. Therefore, hypothesis two was accepted for grade five.

Grade six. The difference related to teacher experience (Variable B) was not significant at the .05 level of confidence for grade six. As shown in Table 2, the impact of Variable B had an F ratio of .980 which was significant at the .323 level. The experienced teacher group had a posttest mean of 154.379 and the inexperienced teacher group had a posttest mean of 152.908. Therefore, hypothesis two was accepted for grade six.

Impact of Variable C: Teacher Opinion of the Instructional Setting on Reading Achievement of Students

The third hypothesis was to the effect that there would be no significant differences at the .05 level between the reading achievement of the Title I students at each grade who were taught by teachers who had a positive opinion of the instructional setting and those who were taught by teachers who had a negative opinion of the instructional setting. Shown in Table 3 are the pretest and posttest reading achievement means for each grade by level of teacher opinion (Variable C) and the F ratios which show the impact of the variable. The results of the analysis in terms of hypothesis three are presented for each grade level in the following paragraphs.

Kindergarten. Table 3 contains the data showing that the difference related to teacher opinion of the instructional setting (Variable C) was not significant at the .05 level of confidence. As shown in the table, the F ratio was .716 which was significant at the .398 level. The posttest reading achievement mean for the positive opinion group (Variable C_1) was 78.021. The posttest reading achievement mean for the negative opinion group (Variable C_2) was 76.391. Hypothesis three was accepted for kindergarten.

Table 3

Pretest and Posttest Mean Reading Achievement Scores[a] by Type of Teacher Opinion of the Instructional Setting (Variable C) for Grades K-6 and F Ratios

Grade Level	Grade Level N	Grade Level Posttest Mean	Type of Teacher Opinion of the Instructional Setting						F Ratio[b]
			Positive			Negative			
			n	Pretest Mean	Posttest Mean	n	Pretest Mean	Posttest Mean	
K	722	77.658	561	31.007	78.021	161	31.764	76.391	.716
1	684	91.906	571	68.208	92.112	113	67.973	90.867	.012
2	1,738	117.116	1,450	101.405	117.103	288	101.542	117.184	1.641
3	561	127.127	435	111.690	126.637	126	112.579	128.817	2.961
4	1,382	138.161	1,167	126.350	137.826	215	128.060	139.981	.008
5	1,252	146.065	1,003	133.721	145.523	249	133.333	148.249	11.284[c]
6	1,228	153.936	1,186	145.554	153.941	42	144.429	153.786	.070

[a]Mean scores expressed in terms of scaled scores.

[b]Based on a comparison of teacher opinion with the pretest scores being used as a covariate.

[c]Significant beyond the .05 level.

Grade one. Table 3 contains the data showing that the impact of teacher opinion of the instructional setting was not significant for grade one. The F ratio was .012 which was not significant at the .05 level of confidence (.913). As shown in the table, the positive opinion group (Variable C_1) had a posttest mean of 92.112 and the negative opinion group (Variable C_2) had a posttest mean of 90.867. Therefore, hypothesis three was accepted for grade one.

Grade two. As shown in Table 3, the impact of Variable C was not significant at the .05 level of confidence. The F ratio was 1.641 which was significant at the .200 level. As can be seen in the table, the positive opinion group had a posttest mean of 117.103 and the negative opinion group had a posttest mean of 117.184. Since the difference between these means was not significant at the .05 level, hypothesis three was accepted for grade two.

Grade three. The difference related to teacher opinion of the instructional setting (Variable C) was not significant for grade three. As shown in Table 3, the F ratio was 2.961 which was not significant at the .05 level of confidence (.086). The positive opinion group had a posttest mean of 126.637 and the negative opinion group had a posttest mean of 128.817. Therefore, hypothesis three was accepted for grade three.

Grade four. As shown in Table 3, the impact of Variable C was not significant at the .05 level. The F ratio was .008 which was significant at the .927 level. Positive opinion classes had a posttest mean of 137.826 and negative opinion classes had a posttest mean of 139.981. Since the difference between these means was not significant, hypothesis three was accepted for grade four.

Grade five. The impact of Variable C, teacher opinion of the instructional setting, was significant beyond the .05 level of confidence. The F ratio was 11.284 which was significant at the .001 level. As shown in the table, the positive opinion group had a posttest mean of 145.523 and the negative opinion group had a posttest mean of 148.249. Therefore, hypothesis three was rejected for grade five.

Grade six. As shown in Table 3, the difference related to teacher opinion of the instructional setting was not significant at the .05 level of confidence. Having an F ratio of .070, it was significant at the .792 level. The posttest mean for the positive opinion group (Variable C_1) was 153.941 and the posttest mean for the negative opinion group (Variable C_2) was 153.786. Therefore, hypothesis three was accepted for grade six.

Impact of Interaction Between Variable A: Instructional Setting and Variable B: Teacher Experience on Reading Achievement of Students

The fourth hypothesis was to the effect that there would be no significant difference in the reading achievement of the Title I students when the interactions among types of instructional setting (pullout-mainstream) and the experience of the teacher (experienced-inexperienced) were considered. The data regarding this hypothesis for each grade level are presented in Table 4. Shown are the pretest and posttest reading achievement means for the following groups at each grade level: pullout setting-experienced teacher, pullout setting-inexperienced teacher, mainstream setting-experienced teacher, and mainstream setting-inexperienced teacher. Also shown is the F ratio

Table 4

Pretest and Posttest Mean Reading Achievement Scores[a] by Type of Instructional Setting (Variable A) and Level of Teacher Experience (Variable B) for Grades K-6 and F Ratios

Grade Level and Instructional Setting	Level of Teacher Experience: Experienced n	Experienced Pretest Mean	Experienced Posttest Mean	Inexperienced n	Inexperienced Pretest Mean	Inexperienced Posttest Mean	F Ratio[b]
Kindergarten							
Pullout	246	32.020	80.541	75	31.573	72.067	7.811[c]
Mainstream	262	30.412	76.828	139	30.906	77.137	
Grade 1							
Pullout	413	67.910	92.332	33	70.939	91.818	.001
Mainstream	189	67.831	91.328	49	69.796	90.612	
Grade 2							
Pullout	1,015	101.464	117.151	164	101.585	114.805	.238
Mainstream	450	101.647	117.916	109	99.945	116.982	
Grade 3							
Pullout	352	111.358	126.807	71	112.324	126.338	1.837
Mainstream	93	112.849	127.086	45	113.378	130.956	

Table 4--continued

Grade Level and Instructional Setting	Level of Teacher Experience: Experienced n	Experienced Pretest Mean	Experienced Posttest Mean	Inexperienced n	Inexperienced Pretest Mean	Inexperienced Posttest Mean	F Ratio
Grade 4							
Pullout	850	126.321	137.556	135	126.148	137.104	7.955[c]
Mainstream	352	126.923	140.321	45	131.200	135.867	
Grade 5							
Pullout	708	133.955	145.904	194	132.598	145.067	.472
Mainstream	281	133.359	146.786	69	134.551	147.594	
Grade 6							
Pullout	817	145.873	154.381	351	144.624	152.778	.020
Mainstream	41	145.878	154.341	19	145.842	155.316	

[a]Mean scores expressed in terms of scaled scores.

[b]Based on the interaction of instructional setting and teacher experience (A x B).

[c]Significant beyond the .05 level.

resulting from the analysis at each grade level. In the paragraphs which follow, the results by grade level are described.

Kindergarten. Table 4 contains the data showing that the difference in posttest reading achievement scores resulting from the interaction of instructional setting and teacher experience (A x B) was significant beyond the .05 level of confidence. The F ratio was 7.811 which was significant at the .005 level. The reading achievement posttest means shown in the table are as follows: pullout setting-experienced teacher, 80.541; pullout setting-inexperienced teacher, 72.067; mainstream setting-experienced teacher, 76.828; and mainstream setting-inexperienced teacher, 77.137. Hypothesis four was rejected for kindergarten.

Grade one. As shown in Table 4, there was no significant instructional setting-teacher experience (A x B) interaction. The F ratio was .001 which was not significant at the .05 level of confidence (.969). As can be seen from the table, the posttest mean for the pullout setting-experienced teacher group was 92.332; the posttest mean for the pullout setting-inexperienced teacher group was 91.818; the posttest mean for the mainstream setting-experienced teacher group was 91.328; and the posttest mean for the mainstream setting-inexperienced teacher group was 90.612. There was no significant interaction; therefore, hypothesis four was accepted for grade one.

Grade two. Table 4 also contains the data showing that the impact of the interaction of instructional setting and teacher experience was not significant at the .05 level for grade two. With an F ratio of .238, it was significant at the .625 level of confidence. The following instructional setting-teacher experience reading achievement posttest

means are shown in the table: pullout setting-experienced teacher, 117.151; pullout setting-inexperienced teacher, 114.805; mainstream setting-experienced teacher, 117.916; and mainstream setting-inexperienced teacher, 116.982. Since there was no significant A x B interaction, hypothesis four was accepted for grade two.

Grade three. The interaction of instructional setting and teacher experience (A x B) was not significant for grade three. As shown in Table 4, the F ratio was 1.837 which was not significant at the .05 level of confidence (.176). The pullout setting-experienced teacher group had a posttest mean of 126.807; the pullout setting-inexperienced teacher group had a posttest mean of 126.338; the mainstream setting-experienced teacher group had a posttest mean of 127.086; and the mainstream setting-inexperienced teacher group had a posttest mean of 130.956. Hypothesis four was accepted for grade three.

Grade four. In the initial analysis of covariance, no interactions were obtained because of empty cells in the overall matrix (teacher opinion cells). Therefore, it was necessary to eliminate the teacher opinion variable from the overall matrix in order to obtain an instructional setting-teacher experience interaction. Using just these two variables, a 2 x 2 analysis of covariance was computed. (The results of this covariance analysis are contained in Appendix B in Table 12 with the initial analysis.) The interaction for instructional setting and teacher experience was significant beyond the .05 level of confidence. As shown in Table 4, the F ratio was 7.955 which was significant at the .005 level. The posttest mean for the pullout setting-experienced teacher group was 137.556; the posttest mean for the pullout setting-inexperienced teacher group was 137.104; the posttest mean for

the mainstream setting-experienced teacher group was 140.321; and the posttest mean for the mainstream setting-inexperienced teacher group was 135.867. Since the A x B interaction was significant, hypothesis four was rejected for grade four.

Grade five. As shown in Table 4, there was no significant instructional setting-teacher experience interaction (A x B). With the F ratio being .472, it was not significant at the .05 level of confidence (.492). The following instructional setting-teacher experience posttest means are shown in the table: pullout setting-experienced teacher, 145.904; pullout setting-inexperienced teacher, 145.067; mainstream setting-experienced teacher, 146.786; and mainstream setting-inexperienced teacher, 147.594. Hypothesis four was accepted for grade five.

Grade six. The differences resulting from the interaction of instructional setting and teacher experience (A x B) were not significant at the .05 level of confidence. As shown in Table 4, the F ratio was .020 which was significant at the .887 level. The instructional setting and teacher experience posttest means, presented in the table, are as follows: pullout setting-experienced teacher, 154.381; pullout setting-inexperienced teacher, 152.778; mainstream setting-experienced teacher, 154.341; and mainstream setting-inexperienced teacher, 155.316. Since there was no significant interaction, hypothesis four was accepted for grade six.

Impact of Interaction Between Variable A: Instructional Setting and Variable C: Teacher Opinion of the Instructional Setting on Reading Achievement of Students

The fifth hypothesis was to the effect that there would be no significant difference in the reading achievement of the Title I

students when the interactions among types of instructional setting (pullout-mainstream) and the teacher's opinion of the instructional setting (positive-negative) were considered. The data regarding this hypothesis for each grade level are presented in Table 5. Shown are the pretest and posttest reading achievement means for the following groups at each grade level: pullout setting-positive opinion, pullout setting-negative opinion, mainstream setting-positive opinion, and mainstream setting-negative opinion. Also shown is the F ratio resulting from the analysis at each grade level. In the following paragraphs, the results by grade level are described.

Kindergarten. Table 5 contains the data showing that the impact of the interaction of instructional setting and teacher opinion of the instructional setting (A x C) was not significant at the .05 level of confidence. The F ratio was .067 which was significant at the .796 level. The following instructional setting-teacher opinion reading achievement posttest means are shown in the table: pullout setting-positive opinion, 78.591; pullout setting-negative opinion, 69.000; mainstream setting-positive opinion, 77.266; and mainstream setting-negative opinion, 76.438. Hypothesis five was accepted for kindergarten.

Grade one. Table 5 also contains the data showing that the impact of the interaction of instructional setting and teacher opinion of the instructional setting was not significant at the .05 level of confidence. With an F ratio of .958, it was significant at the .328 level. The following instructional setting-teacher opinion reading achievement posttest means are shown in the table: pullout setting-positive opinion, 92.200; pullout setting-negative opinion, 113.000; mainstream setting-positive opinion, 91.803; and mainstream setting-negative opinion,

Table 5

Pretest and Posttest Mean Reading Achievement Scores[a] by Type of Instructional Setting (Variable A) and Type of Teacher Opinion of the Instructional Setting (Variable C) for Grades K-6 and F Ratios

Grade Level and Instructional Setting	Type of Teacher Opinion of the Instructional Setting: Positive n	Positive Pretest Mean	Positive Posttest Mean	Negative n	Negative Pretest Mean	Negative Posttest Mean	F Ratio[b]
Kindergarten							
Pullout	320	32.006	78.591	1	3.000	69.000	.067
Mainstream	241	29.680	77.266	160	31.944	76.438	
Grade 1							
Pullout	444	68.047	92.200	2	87.500	113.000	.958
Mainstream	127	68.772	91.803	111	67.622	90.468	
Grade 2							
Pullout	1,164	101.482	116.799	15	101.400	118.800	1.149
Mainstream	286	101.091	118.343	273	101.549	117.095	
Grade 3							
Pullout	411	111.533	126.564	12	111.083	132.333	1.029
Mainstream	24	114.375	127.875	114	112.737	128.447	

Table 5--continued

Grade Level and Instructional Setting	Type of Teacher Opinion of the Instructional Setting						
	Positive			Negative			
	n	Pretest Mean	Posttest Mean	n	Pretest Mean	Posttest Mean	F Ratio[b]
Grade 4							
Pullout	985	126.297	137.494	--[d]	--	--	--
Mainstream	182	126.637	139.621	215	128.060	139.981	
Grade 5							
Pullout	897	133.663	145.773	5	133.600	137.000	6.582[c]
Mainstream	106	134.208	143.415	244	133.328	148.480	
Grade 6							
Pullout	1,155	145.552	153.932	13	140.692	151.000	.032
Mainstream	31	145.645	154.290	29	146.103	155.034	

[a]Mean scores expressed in terms of scaled scores.

[b]Based on the interaction of instructional setting and teacher opinion (A x C).

[c]Significant beyond the .05 level.

[d]There were no students in this category; thus an analysis of the A x C interaction for this grade level was not possible.

90.468. Since there was no significant A x C interaction, hypothesis five was accepted for grade one.

Grade two. The interaction of instructional setting and teacher opinion of the instructional setting (A x C) was not significant for grade two. As shown in Table 5, the F ratio was 1.149 which was not significant at the .05 level (.284). The pullout setting-positive opinion group had a posttest mean of 116.799; the pullout setting-negative opinion group had a posttest mean of 118.800; the mainstream setting-positive opinion group had a posttest mean of 118.343; and the mainstream setting-negative opinion group had a posttest mean of 117.095. Hypothesis five was accepted for grade two.

Grade three. Contained in Table 5 are the data showing that the interaction of instructional setting and teacher opinion (A x C) was not significant at the .05 level of confidence. As shown in the table, the F ratio was 1.029 which was significant at the .311 level. The posttest mean for the pullout setting-positive opinion group was 126.564; the posttest mean for the pullout setting-negative opinion group was 132.333; the posttest mean for the mainstream setting-positive opinion group was 127.875; and the posttest mean for the mainstream setting-negative opinion group was 128.447. Hypothesis five was accepted for grade three.

Grade four. As indicated earlier, there was an empty pullout setting-negative opinion cell. Since it was impossible to compute the instructional setting-teacher opinion interaction, there was no basis for making a judgment about hypothesis five for grade four. In order for the reader to gain some understanding, however, the other three instructional setting-teacher opinion posttest means are shown in the

table as follows: pullout setting-positive opinion, 137.494; mainstream setting-positive opinion, 139.621; and mainstream setting-negative opinion, 139.981.

Grade five. The interaction of instructional setting and teacher opinion was significant beyond the .05 level of confidence. As shown in Table 5, the F ratio was 6.582 which was significant at the .010 level. The following instructional setting-teacher opinion posttest means are shown in the table: pullout setting-positive opinion, 145.773; pullout setting-negative opinion, 137.000; mainstream setting-positive opinion, 143.415; and mainstream setting-negative opinion, 148.480. Since the A x C interaction was significant, hypothesis five was rejected for grade five.

Grade six. As shown in Table 5, there was no significant instructional setting-teacher opinion interaction (A x C). With the F ratio being .032, it was not significant at the .05 level of confidence (.857). The pullout setting-positive opinion group had a posttest mean of 153.932; the pullout setting-negative opinion group had a posttest mean of 151.000; the mainstream setting-positive opinion group had a posttest mean of 154.290; and the mainstream setting-negative opinion group had a posttest mean of 155.034. Hypothesis five was accepted for grade six.

Impact of Interaction Between Variable B: Teacher Experience and Variable C: Teacher Opinion of the Instructional Setting on Reading Achievement of Students

The sixth hypothesis in the study was that there would be no significant difference in the reading achievement of the Title I students

when the interactions among the levels of teacher experience (experienced-inexperienced) and the teacher's opinion of the instructional setting (positive-negative) were considered. Table 6 contains the data regarding this hypothesis for each grade level. The pretest and posttest reading achievement means are presented for the following groups at each grade level: experienced teacher-positive opinion, experienced teacher-negative opinion, inexperienced teacher-positive opinion, and inexperienced teacher-negative opinion. The F ratio resulting from the analysis is also presented for each grade level. In the following paragraphs, the results by grade level are described.

Kindergarten. Table 6 contains the data showing that the impact of the interaction of teacher experience and teacher opinion of the instructional setting (B x C) was not significant at the .05 level of confidence. The F ratio was .278 which was significant at the .598 level. The following teacher experience-teacher opinion reading achievement posttest means are shown in the table: experienced teacher-positive opinion, 79.144; experienced teacher-negative opinion, 76.814; inexperienced teacher-positive opinion, 75.349; and inexperienced teacher-negative opinion, 75.396. Hypothesis six was accepted for kindergarten.

Grade one. Table 6 also contains the data showing that the interaction of teacher experience and teacher opinion (B x C) was not significant at the .05 level of confidence. The F ratio was .018 which was significant at the .894 level. As shown in the table, the experienced teacher-positive opinion group had a posttest mean of 92.159; the experienced teacher-negative opinion group had a posttest mean of 91.163; the inexperienced teacher-positive opinion group had a posttest

Table 6

Pretest and Posttest Mean Reading Achievement Scores[a] by Level of Teacher Experience (Variable B) and Type of Teacher Opinion of the Instructional Setting (Variable C) for Grades K-6 and F Ratios

Grade Level and Teacher Experience	Type of Teacher Opinion of the Instructional Setting						
	Positive			Negative			
	n	Pretest Mean	Posttest Mean	n	Pretest Mean	Posttest Mean	F Ratio[b]
Kindergarten							
Experienced	395	30.929	79.144	113	32.106	76.814	.278
Inexperienced	166	31.193	75.349	48	30.958	75.396	
Grade 1							
Experienced	516	67.909	92.159	86	67.744	91.163	.018
Inexperienced	55	71.018	91.673	27	68.704	89.926	
Grade 2							
Experienced	1,218	101.491	117.411	247	101.664	117.259	.205
Inexperienced	232	100.953	115.487	41	100.805	116.732	
Grade 3							
Experienced	357	111.465	126.574	88	112.500	128.045	.239
Inexperienced	78	112.718	126.923	38	112.763	130.605	

Table 6--continued

Grade Level and Teacher Experience	Type of Teacher Opinion of the Instructional Setting						
	Positive			Negative			
	n	Pretest Mean	Posttest Mean	n	Pretest Mean	Posttest Mean	F Ratio[b]
Grade 4							
Experienced	1,011	126.379	138.002	191	127.126	140.293	2.976
Inexperienced	156	126.167	139.686	24	135.500	137.500	
Grade 5							
Experienced	781	133.941	145.643	208	133.202	148.077	.183
Inexperienced	222	132.946	145.104	41	134.000	149.122	
Grade 6							
Experienced	839	145.897	154.399	19	144.789	153.474	.116
Inexperienced	347	144.723	152.833	23	144.130	154.043	

[a]Mean scores expressed in terms of scaled scores.

[b]Based on the interaction of teacher experience and teacher opinion (B x C).

[c]Significant beyond the .05 level.

mean of 91.673; and the inexperienced teacher-negative opinion group had a posttest mean of 89.926. Since there was no significant interaction, hypothesis six was accepted for grade one.

Grade two. The interaction of teacher experience and teacher opinion of the instructional setting was not significant. As shown in Table 6, the F ratio was .205 which was not significant at the .05 level of confidence (.651). The following teacher experience-teacher opinion posttest means are shown in the table: experienced teacher-positive opinion, 117.411; experienced teacher-negative opinion, 117.259; inexperienced teacher-positive opinion, 115.487; and inexperienced teacher-negative opinion, 116.732. Hypothesis six was accepted for grade two.

Grade three. As shown in Table 6, there was no significant teacher experience-teacher opinion interaction (B x C). With the F ratio being .239, it was not significant at the .05 level of confidence (.625). The posttest mean for the experienced teacher-positive opinion group was 126.574; the posttest mean for the experienced teacher-negative opinion group was 128.054; the posttest mean for the inexperienced teacher-positive opinion group was 126.923; and the posttest mean for the inexperienced teacher-negative opinion group was 130.605. Hypothesis six was accepted for grade three.

Grade four. Because of an empty cell in the overall matrix (pull-out setting-negative opinion cell), no interactions were obtained in the initial analysis of covariance. Therefore, it was necessary to eliminate the instructional setting variable from the overall matrix in order to obtain a teacher experience-teacher opinion interaction. Using just these two variables, a 2 x 2 analysis of covariance was

computed. (The results of this covariance analysis are contained in Appendix B in Table 12 with the initial analysis and the 2 x 2 analysis referred to earlier for testing hypothesis four.) The interaction of teacher experience and teacher opinion of the instructional setting was not significant at the .05 level of confidence. As shown in Table 6, the F ratio was 2.976 which was significant at the .085 level. The posttest mean for the experienced teacher-positive opinion group was 138.002; the posttest mean for the experienced teacher-negative opinion group was 140.293; the posttest mean for the inexperienced teacher-positive opinion group was 139.686; and the posttest mean for the inexperienced teacher-negative opinion group was 137.500. Hypothesis six was accepted for grade four.

Grade five. The impact of the interaction of teacher experience and teacher opinion of the instructional setting (B x C) was not significant at the .05 level. As shown in Table 6, the F ratio was .183 which was significant at the .669 level of confidence. The teacher experience and teacher opinion posttest means are as follows: experienced teacher-positive opinion, 145.643; experienced teacher-negative opinion, 148.077; inexperienced teacher-positive opinion, 145.104; and inexperienced teacher-negative opinion, 149.122. Since there was no significant interaction, hypothesis six was accepted for grade five.

Grade six. As shown in Table 6, there was no significant teacher experience-teacher opinion interaction (B x C). The F ratio was .116 which was not significant at the .05 level of confidence (.733). The teacher experience and teacher opinion of the instructional setting posttest means as presented in the table are as follows: experienced

teacher-positive opinion, 154.399; experienced teacher-negative opinion, 153.474; inexperienced teacher-positive opinion, 152.833; and inexperienced teacher-negative opinion 154.043. There was no significant B x C interaction; therefore, hypothesis six was accepted for grade six.

Impact of Interactions Among Variable A: Instructional Setting, Variable B: Teacher Experience, and Variable C: Teacher Opinion of the Instructional Setting on Reading Achievement of Students

The last hypothesis was to the effect that there would be no significant difference in posttest reading achievement scores resulting from the interaction among the three variables (instructional setting, teacher experience, and teacher opinion of the instructional setting). As noted in the introduction to this chapter, due to insufficient data in some of the cells, it was impossible to compute the effects of this second order interaction. Therefore, there was no basis for accepting or rejecting this hypothesis. However, in order to give the reader some understanding, contained in Appendix C in Tables 15, 16, 17, 18, 19, 20, and 21 are the pretest and posttest reading achievement means for each grade level grouped by the following subgroups: pullout setting-experienced teacher-positive opinion, pullout setting-experienced teacher-negative opinion, pullout setting-inexperienced teacher-positive opinion, pullout setting-inexperienced teacher-negative opinion, mainstream setting-experienced teacher-positive opinion, mainstream setting-experienced teacher-negative opinion, mainstream setting-inexperienced teacher-positive opinion, and mainstream setting-inexperienced teacher-negative opinion.

Summary

An analysis of covariance within a 2 x 2 x 2 factorial design was used to test the hypotheses of the study. As noted, the first three hypotheses related to the impact on the posttest reading achievement scores of the instructional setting, teacher experience, and teacher opinion of the instructional setting variables individually. Hypotheses four, five, and six focused on interactions among these variables on a 2 x 2 basis. Hypothesis seven dealt with the three way interaction among the variables.

Table 7 contains a summary of the findings relative to each of the hypotheses. As can be seen from the table, in regard to the impact of instructional setting, hypothesis one was accepted for all grades except grades two and four. The F ratios were significant at the .05 level for grades two and four, being 4.909 and 5.442, respectively.

The second variable related to teacher experience. The hypothesis was accepted for all grade levels except kindergarten and grades two and four. The F ratios for these grades were 4.821, 6.455, and 4.470, respectively, and each was significant at the .05 level.

Teacher opinion of the instructional setting was the third variable. Hypothesis three was accepted for all grade levels except grade five. The F ratio for grade five, significant at the .05 level, was 11.284.

Hypothesis four was related to the interaction of instructional setting and teacher experience. It was accepted for all grade levels except kindergarten and grade four. The F ratios were 7.811 and 7.955, both significant at the .05 level.

Table 7

Summary of Findings Relative to the Hypotheses About the Relationships of Instructional Setting (Variable A), Teacher Experience (Variable B), and Teacher Opinion of the Instructional Setting (Variable C) to Reading Achievement of Title I Students

Hypotheses	Grade Levels						
	K	1	2	3	4	5	6
1. Variable A	A	A	R	A	R	A	A
2. Variable B	R	A	R	A	R	A	A
3. Variable C	A	A	A	A	A	R	A
4. Variables A x B	R	A	A	A	R	A	A
5. Variables A x C	A	A	A	A	I	R	A
6. Variables B x C	A	A	A	A	A	A	A
7. Variables A x B x C	I	I	I	I	I	I	I

A = Accept at the .05 level.

R = Reject at the .05 level.

I = Insufficient data to test.

The fifth hypothesis, related to the interaction of instructional setting and the teacher opinion of the instructional setting, was accepted except for grades four and five. Due to insufficient data, hypothesis five could not be tested for grade four. The grade five F ratio was 6.582 which was significant at the .05 level.

Hypothesis six focused on the interaction of teacher experience and teacher opinion of the instructional setting. This hypothesis was accepted for all grade levels.

The last hypothesis, hypothesis seven, related to the interactions among the three variables. Due to insufficient data (empty cells in the overall interaction matrix), hypothesis seven could not be tested.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND DISCUSSION

Summary

School administrators make decisions each year about the instructional setting and the teachers they assign to ESEA Title I classes. Yet, research studies designed to assess the relative impact of these variables have been limited. The study was conducted with the expectation that findings would be of value to administrators in planning and implementing Title I programs.

The problem of the study was to determine if there were differences in reading achievement of Title I students in grades kindergarten through six in an urban school district who were in different types of instructional settings (pullout and mainstream) and to determine if the reading achievement was different when the variables of teacher experience and of teacher opinion of the instructional setting were considered.

For purposes of stating and interpreting the hypotheses, the variables were categorized as Variable A: Instructional setting (pullout and mainstream), Variable B: Teacher experience (experienced and inexperienced), and Variable C: Teacher opinion of the instructional setting (positive and negative). Stated in operational null form, hypothesis one related to the primary question and hypotheses two

through seven related to the secondary questions. The hypotheses for each grade level were as follows:

1. There are no significant differences in reading achievement between the two levels of Variable A.
2. There are no significant differences in reading achievement between the two levels of Variable B.
3. There are no significant differences in reading achievement between the two levels of Variable C.
4. There is no significant interaction between the two levels of Variable A across the two levels of Variable B (A x B).
5. There is no significant interaction between the two levels of Variable A across the two levels of Variable C (A x C).
6. There is no significant interaction between the two levels of Variable B across the two levels of Variable C (B x C).
7. There is no significant interaction between the two levels of Variable A and the two levels of Variable B across the two levels of Variable C (A x B x C).

In the analysis of the data, significance at the .05 level of confidence was used as a minimum for the rejection of a null hypothesis.

The study was conducted in a large urban public school district in northern Florida. Of the 11,645 students enrolled in the Title I program during the 1978-79 school year, 7,567 students who had both a pretest and a posttest reading achievement score and who could be identified with a single teacher participated in the study.

Data pertaining to the independent variables (instructional setting, teacher experience, and teacher opinion of the instructional setting) were collected from teachers on an instrument designed by

the investigator. Data pertaining to the dependent and covariate variables (reading achievement posttest and pretest scores) were obtained from district test records. These data records were matched in order to group the participants according to the various levels of the independent variables.

A 2 x 2 x 2 analysis of covariance with pretest reading achievement scores being used as the covariate was utilized as the basic technique for testing the hypotheses for each grade. The results of the analysis are presented below.

1. In regard to differences based on pullout versus mainstream settings (Variable A), significant differences in reading achievement at the .05 level were found favoring mainstream for grades two and four, with F ratios of 4.909 and 5.442, respectively. There were no differences for grades kindergarten, one, three, five, and six, with F ratios being .075, .369, .826, 2.528, and .017, respectively. However, with the exception of kindergarten and first grade, the posttest scaled score means for the mainstream groups were higher.
2. Significant differences in reading achievement at the .05 level, based on experienced versus inexperienced teachers (Variable B), were found favoring the experienced teacher group for kindergarten and grades two and four, with F ratios of 4.821, 6.455, and 4.470, respectively. For grades one, three, five, and six there were no significant differences. The F ratios for these grades were 1.712, .428, .030, and .980, respectively. With the exception of grade three, however, the experienced teacher groups had higher scaled score means.

3. Based on positive versus negative opinion of the instructional setting (Variable C), differences in reading achievement were significant at the .05 level favoring the negative opinion group for grade five, with an F ratio of 11.284. No significant differences were found for the remaining grades, with F ratios as follows: kindergarten, .716; grade one, .012; grade two, 1.641; grade three, 2.961; grade four, .008; and grade six, .070. The scaled score mean for the negative opinion group was higher in grades two, three, and four.
4. The instructional setting and teacher experience interaction (A x B) resulted in a significant difference at the .05 level in reading achievement for kindergarten and grade four, with F ratios of 7.811 and 7.955, respectively. For the remaining grades there were no significant interactions, the F ratios being .001 for grade one, .238 for grade two, 1.837 for grade three, .472 for grade five, and .020 for grade six.
5. The interaction between instructional setting and teacher opinion of the instructional setting (A x C) resulted in significant differences at the .05 level for grade five, with an F ratio of 6.582. No other significant interactions were found. The F ratios were as follows: kindergarten, .067; grade one, .958; grade two, 1.149; grade three, 1.029; and grade six, .032. Due to insufficient data, the impact of the interaction could not be tested for grade four.
6. The result of the interaction for teacher experience and teacher opinion of the instructional setting (B x C) was not significant at the .05 level for any grade. The F ratios were

.278 for kindergarten, .018 for grade one, .205 for grade two, .239 for grade three, 2.976 for grade four, .183 for grade five, and .116 for grade six.

7. The impact of the three way interaction among the three variables--instructional setting, teacher experience, and teacher opinion of the instructional setting (A x B x C)--could not be tested because of the empty cells in the overall matrix for each grade level.

Conclusions

Based on the findings in the investigation, the following conclusions appear warranted:

1. There was no consistent relationship between the two types of instructional settings (pullout and mainstream) and the reading achievement of Title I students. This conclusion is justified in that the differences in the scaled score means between the two settings were significant for two of the seven grades (grades two and four) and were not significant for the other five grades. Furthermore, the reading achievement did not consistently favor either instructional setting.
2. There was no consistent relationship between the two levels of teacher experience (experienced and inexperienced) and the reading achievement of Title I students. This conclusion is justified in that the differences in the scaled score means between the two levels of teacher experience were significant for three grades (grades kindergarten, two, and four) and

were not significant for the other four grades. The reading achievement means did not consistently favor either the experienced or inexperienced teacher groups.

3. There was no consistent relationship between the two types of teacher opinion of the instructional setting (positive and negative) and the reading achievement of Title I students. This conclusion is justified in that the differences in the scaled score means between the two types of teacher opinion were significant for one grade (grade five) and were not significant for the other grades.
4. There were no consistent interactions among the variables. Justification for this conclusion is that the instructional setting-teacher experience interaction was significant for kindergarten and grade four and was not significant for the other grades; the instructional setting-teacher opinion interaction was significant for grade five, was not tested for grade four (empty cells), and was not significant for the other five grades; the teacher experience-teacher opinion interaction was not significant for any grade. The three way interaction among all three variables was not tested for any grade because of insufficient data.

Given the foregoing, the general conclusion was that there is no logical pattern of relationships among type of instructional setting, level of teacher experience, teacher opinion of the instructional setting in which he/she works, and the reading achievement of students.

Discussion

The general conclusion from the present study is consistent with the general conclusion that may be drawn from the review of the literature. Regarding instructional setting and student achievement, two studies were reviewed. The first was conducted by Kiesling (1971) who found that the pullout setting was more effective than the mainstream setting in producing gains in student performance. In the other study by NIE (1977b), it was found that students in grade one mainstream programs made significantly larger reading gains than did students in pullout programs. There was no difference in the reading gains made by students in the two settings in grade three. When compared to these two studies mentioned, the findings in the present investigation were contrary to those of Kiesling and comparable with those of NIE. In the present investigation significant differences were found favoring the mainstream setting in grades two and four. Although not statistically significant, differences were found favoring the mainstream setting for all grades except grade one. As can be seen from the previous studies and from the present investigation, no consistently logical pattern of relationships emerged relative to instructional setting.

A number of studies were reviewed regarding teacher experience and student achievement. In some of the studies teacher experience related positively to student achievement. In some other studies teacher experience had a negative relation to student achievement. And in yet other studies the data were mixed: some positive relationships, some negative, and some with no relationship. In their review of the

literature related to indicators for learning, Powell, Bolduc, and Wenzel (1977) concluded that a positive relationship did exist between teacher experience and student achievement. The findings from the present investigation did not support this conclusion in that significant differences were found favoring inexperienced teachers for three of the seven grades (grades kindergarten, one, and two). With the exception of grade three, differences (nonsignificant) favoring the inexperienced teachers were found. Again, no consistent pattern emerged in regard to teacher experience.

Regarding teacher opinion of the instructional setting and student achievement, no studies were found. However, studies dealing with attitude or variables which were purported to measure teacher attitude were reviewed. The results of the studies were mixed; some positive and some negative relationships were found. In most studies that used the response to a single question as the attitude variable, the researchers found a positive relationship to student achievement. In other studies which used multiple questions to measure teacher attitude, the researchers found negative or mixed relationships to student achievement.

The teacher opinion variable in the present study was indirectly related to the attitude variable in the previous studies in that the single question of whether the Title I teacher liked or disliked the instructional setting was asked. However, contrary to the previous single question studies, in the present study significant differences were found favoring the negative opinion group for grade five. Although no other significant differences were found, differences for four of the other six grades favored the negative opinion groups. As

can be seen from the previous single and multiple question studies and from the present investigation, no consistently significant pattern emerged in regard to teacher opinion, specifically, teacher opinion of the instructional setting.

Since no consistently logical and significant pattern of relationships emerged for any of the three variables, what then are the implications for policymakers and school administrators? First, the reader is reminded that the design of the study was ex post facto, meaning that the relationships cannot be interpreted as cause-effect conclusions. The reader is further reminded that the participants in the study were confined to a single school district; therefore, the findings are suggestive rather than conclusive for generalizing beyond the participants in question. However, the results of the study do contribute to the accumulated knowledge about the variables and their relation to student achievement.

The United States Congress enacted legislation in 1974 requiring a study of the service delivery alternatives (including instructional setting) which might improve the effectiveness of compensatory education. Since the specific components of ESEA Title I programs are planned by local school districts, local policymakers are also concerned about the components of effective Title I programs. Although not specifically stated in the NIE study, it can be assumed that a concern for program effectiveness implies a concern for program cost. If two programs produce equal results, then the program with the least cost is more effective. A logical assumption can be made about the relative costs of pullout and mainstream programs. Pullout programs require separate facilities with all of the accompanying expenditures:

furniture, utilities, custodial service, and maintenance services. Mainstream programs, since they operate within the regular classroom, require no such expenses. Since there is no consistent relationship between type of instructional setting and student achievement and since the cost of mainstream programs is less than the cost of pullout programs, it can be said that policymakers should consider the mainstream setting for future guidelines for Title I programs.

As stated in the introduction, the study was conducted with the expectation that the findings would be of value to school administrators in planning and implementing Title I programs. Among the many decisions made by administrators concerning Title I programs are those related to the variables under consideration in the study: instructional setting, teacher experience, and teacher opinion of the instructional setting.

As to instructional setting, administrators have two options: pullout or mainstream. Information from conversations between the investigator and school administrators and from observations by the investigator in the selected district indicated that the pullout setting was the setting most often preferred by teachers and principals. In general, mainstream programs were used when classroom space was not available for pullout programs. Typically, pullout programs are seen as easier to operate than mainstream programs. There are fewer schedule conflicts to resolve (the students just miss the regular class instruction), less resistance by teachers (both Title I and the regular teacher), and more materials readily available to the Title I teacher. The logistics of transporting materials from class to class or of sufficient materials to keep in every classroom is avoided. Given the

foregoing and the findings which indicated that neither program produced better results than the other, the logical decision from the point of view of school district personnel would appear to be to use pullout settings. However, there are other factors that should be considered before making such a decision.

The first factor to be considered is the experience of the Title I teacher. In the present investigation it was concluded that no consistently significant pattern emerged relative to teacher experience and student achievement. Neither the experienced teacher nor the inexperienced teacher had a consistently significant impact on the reading achievement of the students. In addition, only two significant instructional setting-teacher experience interactions were found for the seven grade levels. This means that the level of teacher experience had no discernible influence on student achievement, separately or in combination with types of instructional settings. Therefore, it can be said that teacher experience may not be an important factor for making decisions about the Title I program setting and the teachers assigned to teach in the program.

The second factor to be considered is the teacher's opinion of the instructional setting. As indicated earlier in the discussion, most teachers and principals preferred the pullout setting. Individual teachers reacted in individual ways. Some liked the setting in which they taught; some disliked the setting in which they taught. However, as reported herein, their opinion (positive or negative) of the instructional setting in which they were working made no difference in the reading achievement of students. Additionally, only one instructional setting-teacher opinion interaction was found for the seven

grade levels. The teacher opinion of the instructional setting, whether positive or negative, made no difference in student achievement even in combination with the types of instructional setting. Therefore, teacher opinion of instructional setting may not be an important factor influencing decisions of school administrators.

The third factor is cost. As mentioned earlier costs of pullout programs are, on the surface, higher than for mainstream programs. Utilities, custodial services, and maintenance services for the pullout setting are over and above those required for the regular program. Included in Title I grants is an allocation for indirect costs, a percentage of the total grant for operating costs. This money is used by the district to offset expenses for administering the program, such as bookkeeping, purchasing materials, and employing personnel. However, none of this grant money is allocated directly to the operation of Title I programs in individual schools. All utility, custodial, and maintenance expenses are paid for from the operating budget in individual schools. The administrator should consider this factor when making decisions about the instructional setting of Title I programs. What impact does this additional operating expense have on the total school program?

The fourth factor that should be considered is student achievement. Specifically, what instruction is being missed when Title I students leave the regular classroom to receive supplemental instruction in the pullout setting? Are they missing regular reading instruction? Science? Social studies? Investigators for NIE (1977a) found that students in pullout programs were twice as likely to miss regular instruction as were students in regular instruction. It can be concluded

that if students miss regular reading instruction, then the instruction they receive in the pullout setting is not supplemental and is in violation of the federal guidelines for Title I programs. If students miss regular instruction in other subject areas, then what impact does this have on learning in the broader sense? It is possible that this factor is the most critical one for making decisions about the instructional setting of Title I programs.

In summary, when making decisions about the organization of Title I programs, educational administrators have several factors to consider. These factors include the logistics for operating the program, the cost of the program, and the ultimate impact on the overall achievement of students. Given the results of the present investigation, it would appear that individual administrators must evaluate the impact of these factors (logistics, cost, and overall achievement) because, seemingly, instructional setting, teacher experience, and teacher opinion of the instructional setting make no difference in the achievement of students.

APPENDIX A

DATA COLLECTION INSTRUMENT

DATA COLLECTION INSTRUMENT

Title I
Reading Classes Only

Name _____ School No. _____

_____ Total number of years in the teaching profession. _____ Number of years teaching in Duval County.

Please complete the information below for each of your Title I classes.

1. Location for each Title I class.

   pullout – any location outside the regular classroom.
   Inside – inside the regular classroom.

2. Title I teacher's opinion of class location for each class.

   like – I like the location for this Title I class.
   dislike – I dislike the location for this Title I class

Period _____ Time _____

Students | Grade | Students | Grade

_____ | _____ | _____ | _____
_____ | _____ | _____ | _____
_____ | _____ | _____ | _____
_____ | _____ | _____ | _____
_____ | _____ | _____ | _____

Class Location for this class (Check one)
_____ pullout _____ inside

Title I teacher's opinion of class location for this Title I class (Check one)
_____ like _____ dislike

Period _____ Time _____

Students | Grade | Students | Grade

_____ | _____ | _____ | _____
_____ | _____ | _____ | _____
_____ | _____ | _____ | _____
_____ | _____ | _____ | _____
_____ | _____ | _____ | _____

Class Location for this class (Check one)
_____ pullout _____ inside

Title I teacher's opinion of class location for this Title I class (Check one)
_____ like _____ dislike

Period _____ Time _____

Students | Grade | Students | Grade

_____ | _____ | _____ | _____
_____ | _____ | _____ | _____
_____ | _____ | _____ | _____
_____ | _____ | _____ | _____
_____ | _____ | _____ | _____

Class Location for this class (Check one)
_____ pullout _____ inside

Title I teacher's opinion of class location for this Title I class (Check one)
_____ like _____ dislike

APPENDIX B

SUMMARY OF ANALYSIS OF COVARIANCE FOR READING ACHIEVEMENT SCORES

Table 8

Summary of Analysis of Covariance for Reading Achievement Scores, Grade K

Source	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio	Signif of F
Covariate	1	3,606.725	3,606.725	11.511	.001
Variable A	1	23.472	23.472	.075	.784
Variable B	1	1,510.573	1,510.573	4.821	.028
Variable C	1	224.504	224.504	.716	.398
A x B	1	2,447.443	2,447.443	7.811	.005
A x C	1	20.871	20.871	.067	.796
B x C	1	87.209	87.209	.278	.598
A x B x C[a]					
Explained	7	8,237.188	1,176.741	3.755	.001
Residual	714	223,725.688	313.341		
Total	721	231,962.875	321.724		

[a]Due to empty cells, higher order interactions were suppressed.

Table 9

Summary of Analysis of Covariance for Reading Achievement Scores, Grade 1

Source	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio	Signif of F
Covariate	1	48,060.457	48,060.457	271.019	.000
Variable A	1	65.427	65.427	.369	.544
Variable B	1	303.512	303.512	1.712	.191
Variable C	1	2.101	2.101	.012	.913
A x B	1	.261	.261	.001	.969
A x C	1	169.882	169.882	.958	.328
B x C	1	3.143	3.143	.018	.894
A x B x C[a]					
Explained	7	48,758.313	6,965.473	39.279	.000
Residual	676	119,876.563	177.332		
Total	683	168,634.875	246.903		

[a]Due to empty cells, higher order interactions were suppressed.

Table 10

Summary of Analysis of Covariance for Reading Achievement Scores, Grade 2

Source	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio	Signif of F
Covariate	1	2,572.321	2,572.321	21.517	.000
Variable A	1	586.797	586.797	4.909	.027
Variable B	1	771.731	771.731	6.455	.011
Variable C	1	196.226	196.226	1.641	.200
A x B	1	28.491	28.491	.238	.625
A x C	1	137.377	137.377	1.149	.284
B x C	1	24.471	24.471	.205	.651
A x B x C[a]					
Explained	7	4,057.938	579.705	4.849	.000
Residual	1,730	206,815.063	119.546		
Total	1,737	210,873.000	121.401		

[a]Due to empty cells, higher order interactions were suppressed.

Table 11

Summary of Analysis of Covariance for Reading Achievement Scores, Grade 3

Source	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio	Signif of F
Covariate	1	6,331.238	6,331.238	64.363	.000
Variable A	1	81.279	81.279	.826	.364
Variable B	1	42.124	42.124	.428	.513
Variable C	1	291.271	291.271	2.961	.086
A x B	1	180.713	180.713	1.837	.176
A x C	1	101.176	101.176	1.029	.311
B x C	1	23.472	23.472	.239	.625
A x B x C[a]					
Explained	7	7,321.555	1,045.936	10.633	.000
Residual	553	54,397.363	98.368		
Total	560	61,718.918	110.212		

[a]Due to empty cells, higher order interactions were suppressed.

Table 12

Summary of Analysis of Covariance for Reading Achievement Scores, Grade 4

Source	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio	Signif of F
	1	13,063.414	13,063.414	118.101	.000[a]
Covariate	1	13,064.379	13,064.379	118.794	.000[b]
	1	13,064.309	13,064.309	117.901	.000[c]
	1	601.907	601.907	5.442	.020
Variable A	1	1,046.954	1,046.954	9.520	.002
	1	494.465	494.465	4.470	.035
Variable B	1	494.302	494.302	4.495	.034
	1	518.892	518.892	4.683	.031
	1	.939	.939	.008	.927
Variable C					
	1	445.994	445.994	4.025	.045
A x B	1	874.841	874.841	7.955	.005
A x C					
B x C					
	1	329.744	329.744	2.976	.085
A x B x C[d]					
	4	14,655.813	3,663.953	33.124	.000
Explained	4	15,530.625	3,882.656	35.305	.000
	4	14,384.500	3,596.125	32.454	.000
	1,377	152,313.500	110.613		
Residual	1,377	151,436.125	109.975		
	1,377	152,581.813	110.807		
	1,381	166,969.313	120.905		
Total	1,381	166,966.750	120.903		
	1,381	166,966.313	120.902		

[a]Top line in each row is the result of the initial 2 x 2 x 2 analysis.

[b]Middle line in each row is the result of the 2 x 2 analysis with instructional setting and teacher experience as variables.

[c]Bottom line in each row is the result of the 2 x 2 analysis with teacher experience and teacher opinion of the instructional setting as variables.

[d]Due to empty cells, higher order interactions were suppressed.

Table 13

Summary of Analysis of Covariance for Reading Achievement Scores, Grade 5

Source	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio	Signif of F
Covariate	1	30,308.621	30,308.621	201.510	.000
Variable A	1	380.293	380.293	2.528	.112
Variable B	1	4.444	4.444	.030	.864
Variable C	1	1,697.202	1,697.202	11.284	.001
A x B	1	71.061	71.061	.472	.492
A x C	1	989.982	989.982	6.582	.010
B x C	1	27.543	27.543	.183	.669
A x B x C[a]					
Explained	7	33,425.688	4,775.098	31.748	.000
Residual	1,244	187,106.875	150.407		
Total	1,251	220,532.563	176.285		

[a]Due to empty cells, higher order interactions were suppressed.

Table 14

Summary of Analysis of Covariance for Reading Achievement Scores, Grade 6

Source	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio	Signif of F
Covariate	1	31,282.113	31,282.113	225.572	.000
Variable A	1	2.344	2.344	.017	.897
Variable B	1	135.839	135.839	.980	.323
Variable C	1	9.644	9.644	.070	.792
A x B	1	2.781	2.781	.020	.887
A x C	1	4.489	4.489	.032	.857
B x C	1	16.142	16.142	.116	.733
A x B x C[a]					
Explained	7	31,492.438	4,498.918	32.441	.000
Residual	1,220	169,188.563	138.679		
Total	1,227	200,681.000	163.554		

[a]Due to empty cells, higher order interactions were suppressed.

APPENDIX C

PRETEST AND POSTTEST MEAN READING ACHIEVEMENT SCORES BY TYPE OF INSTRUCTIONAL SETTING (VARIABLE A), LEVEL OF TEACHER EXPERIENCE (VARIABLE B), AND TYPE OF TEACHER OPINION OF THE INSTRUCTIONAL SETTING (VARIABLE C)

Table 15

Pretest and Posttest Mean Reading Achievement Scores[a] by Type of Instructional Setting (Variable A), Level of Teacher Experience (Variable B), and Type of Teacher Opinion of the Instructional Setting (Variable C), Grade K

Instructional Setting and Teacher Experience	Type of Teacher Opinion of the Instructional Setting					
	Positive			Negative		
	n	Pretest Mean	Posttest Mean	n	Pretest Mean	Posttest Mean
Pullout						
Experienced	246	32.020	80.541	--[b]	--	--
Inexperienced	74	31.959	72.108	1	3.000	69.000
Mainstream						
Experienced	149	29.128	76.839	113	32.106	76.814
Inexperienced	92	30.576	77.957	47	31.553	75.532

[a]Mean scores expressed in terms of scaled scores.

[b]There were no students in this category.

Table 16

Pretest and Posttest Mean Reading Achievement Scores[a] by Type of Instructional Setting (Variable A), Level of Teacher Experience (Variable B), and Type of Teacher Opinion of the Instructional Setting (Variable C), Grade 1

Instructional Setting and Teacher Experience	Type of Teacher Opinion of the Instructional Setting					
	Positive			Negative		
	n	Pretest Mean	Posttest Mean	n	Pretest Mean	Posttest Mean
Pullout						
Experienced	411	67.815	92.231	2	87.500	113.000
Inexperienced	33	70.939	91.818	--[b]	--	--
Mainstream						
Experienced	105	68.276	91.876	84	67.274	90.643
Inexperienced	22	71.136	91.455	27	68.704	89.926

[a]Mean scores expressed in terms of scaled scores.

[b]There were no students in this category.

Table 17

Pretest and Posttest Mean Reading Achievement Scores[a] by Type of Instructional Setting (Variable A), Level of Teacher Experience (Variable B), and Type of Teacher Opinion of the Instructional Setting (Variable C), Grade 2

Instructional Setting and Teacher Experience	Type of Teacher Opinion of the Instructional Setting					
	Positive			Negative		
	n	Pretest Mean	Posttest Mean	n	Pretest Mean	Posttest Mean
Pullout						
Experienced	1,000	101.465	117.126	15	101.400	118.800
Inexperienced	164	101.585	114.803	--[b]	--	--
Mainstream						
Experienced	218	101.610	118.720	232	101.681	117.159
Inexperienced	68	99.426	117.132	41	100.805	116.732

[a]Mean scores expressed in terms of scaled scores.

[b]There were no students in this category.

Table 18

Pretest and Posttest Mean Reading Achievement Scores[a] by Type of Instructional Setting (Variable A), Level of Teacher Experience (Variable B), and Type of Teacher Opinion of the Instructional Setting (Variable C), Grade 3

Instructional Setting and Teacher Experience	Type of Teacher Opinion of the Instructional Setting					
	Positive			Negative		
	n	Pretest Mean	Posttest Mean	n	Pretest Mean	Posttest Mean
Pullout						
Experienced	340	111.368	126.612	12	111.083	132.333
Inexperienced	71	112.324	126.338	--[b]	--	--
Mainstream						
Experienced	17	113.412	125.824	76	112.724	127.368
Inexperienced	7	116.714	132.857	38	112.763	130.605

[a]Mean scores expressed in terms of scaled scores.

[b]There were no students in this category.

Table 19

Pretest and Posttest Mean Reading Achievement Scores[a] by Type of Instructional Setting (Variable A), Level of Teacher Experience (Variable B), and Type of Teacher Opinion of the Instructional Setting (Variable C), Grade 4

Instructional Setting and Teacher Experience	Type of Teacher Opinion of the Instructional Setting					
	Positive			Negative		
	n	Pretest Mean	Posttest Mean	n	Pretest Mean	Posttest Mean
Pullout						
Experienced	850	126.321	137.556	--[b]	--	--
Inexperienced	135	126.148	137.104	--[b]	--	--
Mainstream						
Experienced	161	126.683	140.354	191	127.126	140.293
Inexperienced	21	126.286	134.000	24	135.500	137.500

[a]Mean scores expressed in terms of scaled scores.

[b]There were no students in this category.

Table 20

Pretest and Posttest Mean Reading Achievement Scores[a] by Type of Instructional Setting (Variable A), Level of Teacher Experience (Variable B), and Type of Teacher Opinion of the Instructional Setting (Variable C), Grade 5

Instructional Setting and Teacher Experience	Type of Teacher Opinion of the Instructional Setting: Positive n	Positive Pretest Mean	Positive Posttest Mean	Negative n	Negative Pretest Mean	Negative Posttest Mean
Pullout						
Experienced	703	133.957	145.967	5	133.600	137.000
Inexperienced	194	132.598	145.067	--[b]	--	--
Mainstream						
Experienced	78	133.795	142.718	203	133.192	148.350
Inexperienced	28	135.357	145.357	41	134.000	149.122

[a]Mean scores expressed in terms of scaled scores.

[b]There were no students in this category.

Table 21

Pretest and Posttest Mean Reading Achievement Scores[a] by Type of Instructional Setting (Variable A), Level of Teacher Experience (Variable B), and Type of Teacher Opinion of the Instructional Setting (Variable C), Grade 6

Instructional Setting and Teacher Experience	Type of Teacher Opinion of the Instructional Setting					
	Positive			Negative		
	n	Pretest Mean	Posttest Mean	n	Pretest Mean	Posttest Mean
Pullout						
Experienced	817	145.873	154.381	--[b]	--	--
Inexperienced	338	144.775	152.846	13	140.692	151.000
Mainstream						
Experienced	22	146.818	155.091	19	144.789	153.474
Inexperienced	9	142.778	152.333	10	148.600	158.000

[a]Mean scores expressed in terms of scaled scores.

[b]There were no students in this category.

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BIOGRAPHICAL SKETCH

Carolyn Alford Chambliss was born February 21, 1935, in Jacksonville, Florida. She attended schools in Jacksonville and was graduated from Robert E. Lee High School in 1952. After attending Florida State University for two years, she was married to John Oliver Chambliss, III. They have two children: John Oliver Chambliss, IV, and Dorothy Dale Chambliss.

Employed by the Prudential Insurance Company from 1961 to 1963, she resigned to return to college. She was graduated from Jacksonville University in 1964, with a Bachelor of Science degree.

From 1964 to 1970, she taught in elementary schools in Jacksonville (Duval County). During this time she began graduate studies at the University of Florida, receiving the degree of Master of Education in 1969.

From 1970 to the present, she held various administrative and supervisory positions with the Duval County Public Schools: Elementary Reading Coordinator, supervisor of several federally funded programs, Supervisor of Elementary Programs, and Elementary Principal. In 1976, she was admitted to the University of Florida-University of North Florida cooperative program to complete work toward the degree of Doctor of Education.

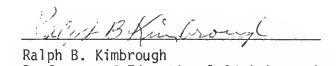
Carolyn A. Chambliss is a member of Kappa Delta Pi, Phi Delta Kappa, Delta Kappa Gamma, American Association of School Administrators,

National and Florida Associations of Elementary School Principals, Duval Elementary School Principals, and the Florida Association for Children Under Six.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

Michael Y. Nunnery, Chairman
Professor of Educational Administration
and Supervision

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.



Ralph B. Kimbrough
Professor of Educational Administration
and Supervision

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

Ruthellen Crews
Professor of Instructional Leadership
and Support

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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This dissertation was submitted to the Graduate Faculty of the Department of Educational Administration and Supervision in the College of Education and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Education.

June 1980

Dean, Graduate School